

**Abstract**

**[0020]** The aim of the invention is to illuminate an x-ray field with little effort on the surface of a patient. Said aim is achieved by an x-ray apparatus, especially a mammographic x-ray apparatus (1.1), which comprises an x-ray (11.1) that is generated by an x-ray source (5.1) and can be delimited by a diaphragm (4.1) and in which LEDs (6) are disposed outside the x-ray between the x-ray source (5.1) and the diaphragm (4.1) as indicating means, said LEDs being distributed along the outer circumference of the x-ray (11.1). Furthermore, the illuminating beam (7.1) of the LEDs (6) is directed in an undeflected fashion onto the x-ray field. In a further embodiment of the invention, at least one LED (6.2) is mounted on a filter array (3) that is fixed between the X-ray source (5.2) and the diaphragm (4.2) such that said LED (6.2) can be swiveled away from the X-ray (11.2).